DESCRIPTION AMENDMENTS

Rewrite the paragraph beginning on page 1, line 2, to read as follows:

The present invention relates to an electrostatic filter construction gas and particle filter ~~according to the preamble of Claim 1~~.

Rewrite the paragraph beginning on page 1, line 15, to read as follows:

The separation ability of particle filters varies greatly ~~depending of~~ depending on the size of the particles. Fibre filters separate particles well if they are more than 5 μm, such as, for example, pollens. However, most of the emissions from traffic and energy production are small particles (particle size less than 1 μm), which are much more difficult to filter.

Rewrite the paragraph beginning on page 1, line 19, to read as follows:

One effective way to filter small particles is the electrostatic precipitator shown in Figure 1, the operation of which is based on an electrically charged particle and the force exerted by an electrical field on the particle. In conventional two-stage electrostatic precipitators used in ~~pair-conditioning~~ air-conditioning applications, the airflow and the particles in it are first led through a charger section 1, in which they are charged electrically. The figure shows the corona wires 4 and the path 3 of the ions. After this, the airflow travels to a collector section 2, which is formed of alternating collector 9 and high-voltage electrodes 15, according to Figure 1. The figure shows the path of a positively charged particle 5 from the filter. The corona voltage value is typically +8 kV and the collector plate value +4 kV. The distance between the plates is typically in the order of 5 mm, so that a normally sized cell contains about 100 plates. Drawbacks with an electrostatic precipitator are the complexity of the solution and its

subsequent expensiveness. At the same time, the dust collecting on the collector plates can cause spark-overs, which lead to the production of unhealthy ozone, an unpleasant sound, and a temporary weakening of the filtering efficiency.

Rewrite the paragraph beginning on page 2, line 13, to read as follows:

Recently, combination filters have appeared on the market, which filter gases and particles. However, the small-particle separation efficiency of combination filters is quite modest (they generally belong to the filter class EU6 - EU7, which means, for example, that they filter a half or less of the ~~0,3 µm particles~~ 0.3 µm particles). The ability of the filters to charge gases is very modest in relation to the nominal airflow. US patent 5,108,470 (Charging element having odour and gas absorbing properties for an electrostatic air filter) discloses a filter, in which a flat electrode containing activated carbon is located between two filter structures. The activated-carbon electrode is connected to an electrical power circuit. The construction is surrounded by metal electrodes, which have no filtering properties. The filter construction is at right angles to the direction of flow.

Rewrite the paragraph beginning on page 4, line 5, to read as follows:

~~More specifically, the particle filter according to the invention is characterized by what is stated in the characterizing portion of Claim 1.~~

Rewrite the paragraph beginning on page 8, line 19, to read as follows:

The solution compactly combines particle and gas filtering. The space required is clearly less than when using separate filters (gas filter + particle filter) of a corresponding capacity. For example, for an airflow of 50 l/s, the space

required is in the order of ~~0,3 m x 0,3 m x 0,3 m~~ 0.3 m x 0.3 m x 0.3 m. The external dimensions can be further reduced from even this, with no loss of effectiveness in particle filter, though this will also reduce the capacity of the gas filter (the changing interval will be shortened).

Rewrite the paragraph beginning on page 9, line 7, to read as follows:

Figure 4 shows the pressure drops for the present invention and a particle filter of the same size class of a known manufacturer. The particle filter is a HEPA class, with a separation capacity of > 95 % for ~~0,3 µm particles~~ 0.3 µm particles, i.e. its filtering capacity is in the same class as that of the invention. The figure shows that even the particle filter by itself has a greater pressure drop than the present invention.

Rewrite the paragraph beginning on page 9, line 17, to read as follows:

Figure 6 compares the separating capacity of the present invention with that of commercial products. Without electrical forces (U = 0 kV), the separation efficiency is extremely modest, but with the aid of particle charging and of an electrical field the separation efficiency increases enormously. The commercial filters have a relatively modest separation efficiency for small particles, whereas a filter equipped with activated-carbon bags will separate more than 95 % of ~~0,3 µm particles~~ 0.3 µm particles, when the airflow is in the order of 50 l/s. It is precisely these small particles that are most hazardous to human health, because they can travel as far as the innermost parts of the lungs.